

483

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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SECURITY INFORMATION

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COUNTRY East Germany

REPORT

SUBJECT Development Projects at Funkwerk
Koepenick

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50X1-HUM

3. Small Musa (Klein Musa) K 3-38;

The Musa receiver rack was sent to the Beelitz radio station for testing on 7 May. Liesemeier, TEA, will remain there for a few days to observe the device. It was ready for operation as soon as it was mounted, and was at least as good as other receivers there. Its definite advantages over simple receivers could not be determined in such a short time, especially since the reception conditions during the testing period were poor.

automatic adjustment of the phase displacement would be desirable in any case, because the manual adjustment, with the speed of the concomitant phase

SECRET

50X1-HUM

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SECRET

- 2 -

50X1-HUM

rotations, would place too great a strain on the operator. The testing of the critical reception times is being carried out now. After testing [redacted] pick up the set again, in order to carry out any necessary repairs and improvements. The laboratory is trying to develop an automatic electronic adjusting device but, up to now, no method for doing this is known. 50X1-HUM

4. Long-range navigation (Weitnavigation) K 3-42 [redacted]

50X1-HUM

The experimental investigation [redacted] It showed that the control frequency shifts do not agree with the data given in literature, although the latter are very scanty. Oscillograms were made which show that they deviate by a factor of 2 from these data. At present, an experimental device is being constructed which is to make an accurate measuring [redacted] 50X1-HUM It is again pointed out that it will be absolutely necessary to find out the exact frequencies in order to order quartzes, which take a long time to manufacture. [redacted]

5. Large station receiver (Grosstationsempfänger) K 3-37; [redacted]

50X1-HUM

The plan has already been approved. Preliminary work has advanced so far that the initial report can be finished by 1 June. The initial report also includes the possibilities of using the large station receiver for Musa and single side band. The situation regarding the single side band receiver has not yet been settled. The over-all project, including the requested funds, was planned in such a way that completion of the project is only possible if all three tasks are approved. Otherwise, there will be difficulties for project K 3-39. A conference with Friedrich of PFZ on large station receivers took place. On 12 May there will be conferences on commercial tubes in Leipzig. At present, not many types of the miniature series are available. The development of the types not yet available in the miniature series is presently being carried out on tubes of series 6. This, however, will require redimensioning once more. At present, no sockets are available for the miniature series. For the single side band receiver closely connected to the large station receiver, a conference with HV Funk must still be held. Friedrich has promised to urge HV Funk for this conference. Radeberg might be interested in the type of single side band receiver, and [redacted] 50X1-HUM Radeberg is interested in future production of the large station receiver and/or of the single side band receiver. A conference is to take place at Radeberg on 18 May on this subject. Dr. Vinzelberg and Ostmann from the transmitter department will attend. [redacted]

PFZ does not favor continuation of the single side band development at the Leipzig Telecommunications Plant (Fernmeldewerk Leipzig). Dr. Kaiser will receive a separate order for the development of the magnetostriktion filters.

6. Goniometer direction finder (Goniometerpeiler) K 3-40; [redacted]

50X1-HUM

Two HF-iron cores were supplied, which meet the requirements. TVE has ordered 10 sets. Dralowid has completed the cores. No order has been placed yet. A crossed-loop laboratory prototype was placed on the roof of building 26 and the cables were run into room 201. The construction of an input stage is still in progress. The financial situation is still critical. TEF was given a compilation of the funds required for this year, in case the goniometer direction finder should require additional development beyond that already planned. This would make the situation in the direction finder department less critical. The second wave range will no longer be built into the loop direction finder and will instead shortly be incorporated into the goniometer direction finder. Construction could start at the end of the year, when part of the construction

SECRET

SECRET

50X1-HUM

- 3 -

50X1-HUM

data have been submitted. This request must be made into a request for a change of plans by TEP. Should this request not be approved, this will mean that no further direction-finding projects in progress, and the chances for the Adcock direction finder which is to be dealt with next year will be very slim.

7. Measuring receiver "long" (Messempefaenger "lang") 2-6604-0025;

Work on the measuring receivers, according to the TVE deadline, has been not at all satisfactory. Change of personnel has had a serious effect on the completion date. a change of personnel should never be carried out on short notice in technological departments. In production of the variable condensers for the "long" measuring receiver, rejects were caused through the fault of GALMA. The pickling was carried on too long, so that the soldering of the stator and rotor plates came loose, and the plates either worked loose or fell out altogether. The silver-plating of the plates was so poor that it peeled off after the items were received by the workshop. The quality of the silver-plating as produced by the local GALMA is inadequate. The parts on which the silver-plating is of great importance are now being subcontracted. After TVE issued notices postponing the date of completion, with no reasons given, nearly all deadlines were delayed by about one month. Whether these new deadlines can be met seems questionable. It seems extremely urgent that someone who is good at meeting deadlines be appointed. So far, not one part of the whole device has been sent to the laboratory. The circuit for the IF part is now under development in the workshop in cooperation with TEE. No wiring plans are to be drawn up for the measuring receivers, but various photographs will be used as wiring diagrams. Since March, TVE has not succeeded in obtaining the necessary resistances for the power packs, so that the power pack has not yet been delivered, although it was completed on time by the workshop. The failure to supply paper condensers, which were called for in the specifications and, according to the list, should have been supplied but were not, has caused considerable difficulties. The condensers which were substituted are much larger. Whether all these difficulties can be eliminated is not yet known.

8. Measuring receiver "short" (Messempefaenger "kurz") 2-6605-0025;

50X1-HUM

The remaining data for the measuring receiver "short" will be supplied to the technology department between 15 and 25 May. The person charged with the measuring receiver "short" at TVE will probably be transferred, so that the situation here will probably be the same as that for the measuring receiver "long".

50X1-HUM

the reasons for this are financial ones. The head start which the engineering department had has been more than lost; for example, the model of the oscillator, for which Konstruktion issued the diagrams two months ago, is still not available. This has caused the following situation at the present time: the engineering department was forced to draw up diagrams for construction of the prototype before the preliminary model had undergone electrical testing in the laboratory. This results in uncertainty and might lead to considerable modifications. GALMA's situation is also difficult. The technology department there should have given assistance, but did not do so. The completion of the damping element and the butterfly circuit (Schmetterlingskreis), which were made in advance as experimental models, had also been delayed by 7 weeks. The difficulties in the laboratory are centered now mainly about the lack of measuring equipment, dependent on test oscillators

which are available for short periods only. According to the measurements carried out so far, for purposes of information, the sensitivity of the measuring receiver is about 0.5 μ V, with a noise ratio of 1:1. This means that the sensitivity with the measuring method to be used will be adequate. Final dimensioning of the input circuit can be determined only after the complete prototype has been submitted. After the set has been completed, considerable time will be needed by the laboratory for compensation and calibration work, so that the hours set by the original plan will not be enough, but additional work will have to be done.

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SECRET

SECRET

50X1-HUM

- 4 -

9. Automatic alarm receiver (Automatischer Alarmempfänger) 8-6301-004;

The work performed so far comprised mainly the development of projects for a time selector without relays for the alarm signal. One project was completed. A second project, which seems to be cheaper, is now being worked out. The first project employs the same principle as the relay selector used up to now, except that it has a tube circuit in the place of relays. The new design deviates from this and provides for a different selection principle (use of pulses). No plans for the receiver have been made so far. The specifications for the receiver, however, are known in principle.

Comments:

50X1-HUM

2. Post- u.Fernmeldetechnisches Zentralamt - Post & telecommunications Central Office.
3. GALMA is the name of one of the departments of the Funkwerk, possibly the electroplating department.

SECRET